

## CLAIMS

What is claimed is:

1. A robot system comprises a mobile robot with a driving part to move, comprising:  
a light commander to emit light and give a command to correspond to a reflecting position at which the light is reflected;  
a position detector to receive information on the reflecting position as an image, and to detect the reflecting position; and  
a controller to determine a reflecting trace based on the reflecting position detected by the position detector, and to output the reflecting trace to the driving part to control the driving part.
2. The robot system according to claim 1, further comprising:  
a memory to store the command, and a command pattern formed by the reflecting which corresponds to the command,  
wherein the controller determines whether the reflecting trace based on the reflecting position is in accordance with the command pattern corresponding to the command stored in the memory, and outputs the command to the driving part when the reflecting trace is in accordance with the command pattern.
3. The robot system according to claim 1, wherein the light commander comprises:  
a laser pointer to point at a point in a three dimensional space by using a laser beam.
4. The robot system according to claim 2, wherein the light commander comprises:  
a laser pointer to point at a point in a three dimensional space by using a laser beam.
5. The robot system according to claim 1, wherein the position detector comprises:  
an optical device to detect the reflecting position at which the light emitted from the light commander is reflected.
6. The robot system according to claim 2, wherein the position detector comprises:

an optical device to detect the reflecting position at which the light emitted from the light commander is reflected.

7. The robot system according to claim 1, wherein the optical device comprises:  
an image processor to calculate coordinates of the reflecting position relative to the mobile robot.

8. The robot system according to claim 3, wherein the mobile robot comprises an optical device and a cleaner.

9. The robot system according to claim 8, wherein the optical device receives a teaching position pointed to by the laser pointer and the controller controls the mobile robot to enter a specified area and to clean the area.

10. A method of controlling a robot system including a mobile robot with a driving part to move, the method comprising:

providing a light commander to emit light and give a command corresponding to a reflecting position at which the light is reflected;

providing a memory to store the command, and command pattern formed by the reflecting which corresponds to the command;

detecting the reflecting position by the light from the light commander at a predetermined time interval;

determining a reflecting trace based on the reflecting position when a interval change between a first and second reflecting position is within a predetermined interval;

determining whether the reflecting trace is in accordance with the command pattern; and

controlling the mobile robot to operate according to the command corresponding to the command pattern when the reflecting trace is in accordance with the command pattern.

11. The method according to claim 10, wherein when the reflecting trace is not in accordance with the command pattern and draws a line segment, the mobile robot is controlled to move along the line segment.

12. The method according to claim 10, wherein when the reflecting trace is not in accordance with the command pattern and draws a closed loop, the mobile robot is controlled to enter an area formed by the closed loop.

13. The method according to claim 10, wherein when the reflecting trace is not in accordance with the command pattern and points to a point, the mobile robot is controlled to move to the point.

14. The method according to claim 10, wherein a plurality of reflecting traces corresponding to a plurality of command patterns are combined and stored as a single command pattern in the memory.

15. A robot system including a mobile robot with a driving part to move, comprising:  
a light commander to emit light and give a command to correspond to a reflecting position at which the light is reflected;  
a position detector to receive and detect information on the reflecting position; and  
a controller to determine a reflecting trace based on the reflecting position, controlling the driving part according to the reflecting trace.